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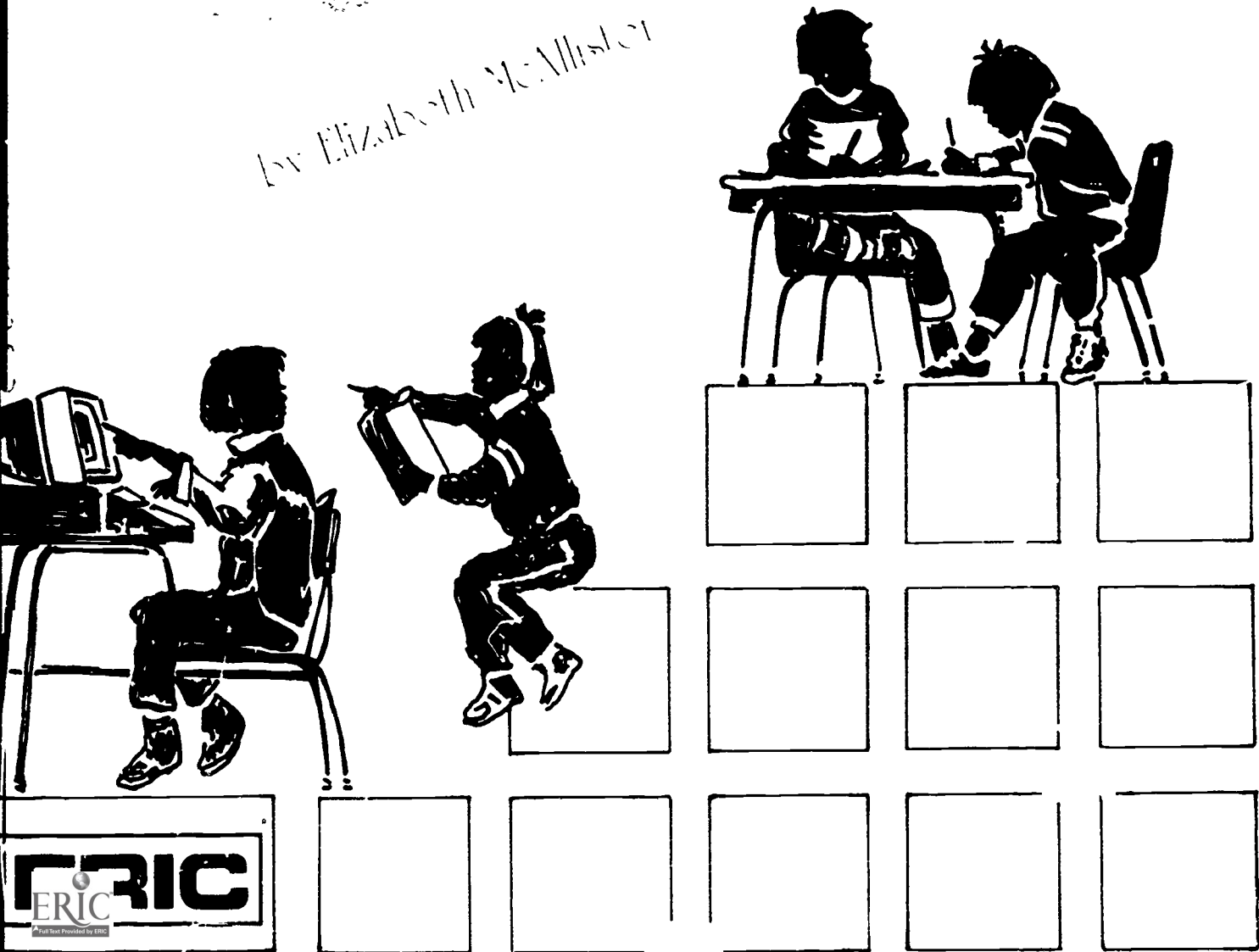
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ABSTRACT

Bringing together peer teaching and collaborative learning, this book presents many specific ideas for elementary teachers to use in their classrooms and explains the principles behind the practices. Six diverse scenarios are presented which represent real experiences of teachers and their students at work in successful peer-learning classrooms. Sections of the book include: (1) "How Some Teachers Use Peer Tutoring"; (2) "Peer Teaching and Collaborative Learning"; (3) "Peer Program Organization"; (4) "How to Get Started"; (5) "How to Use the Evaluation Forms"; (6) a review of research and research in progress; and (7) "Conclusions and Implications." A 57-item bibliography is attached. (RS)

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by Elizabeth McAllister



Peer Teaching and Collaborative Learning in the Language Arts

by Elizabeth McAllister

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Elizabeth A. McAllister is Assistant Professor of Elementary Education at Towson State University, Towson, Maryland. She has taught at the elementary and college levels in Florida, Tennessee, and Maryland for 20 years. She received her doctor's degree at the University of Florida in Gainesville.

Her first book, *Primary Reading Skills Activities Kit* (West Nyack, New York: Center for Applied Research and Education, Simon and Schuster, 1987); her articles on reading, language arts, and elementary curriculum; and her numerous presentations at conferences nationwide indicate Dr. McAllister's perennial research and praxis interests in cognitive learning, brain/learning studies, auditory and visual perception, metacognitive studies, metalinguistics and language development, reading and language-arts strategies, peer teaching in the classroom, and peer coaching in teacher-education settings.

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How Some Teachers Use Peer Tutoring

Teachers are caught in myriad situations in school contexts. Each day has its own unexpected and unwanted interruptions, surprise scenarios, and pressure points that give the best-equipped and spontaneously inventive mind a headache. Teachers need more than just one "Plan B." They need alternative, workable plans ready at the fingertips.

It is so easy to "read about" tried ventures that surpass the norm of what is thought to be standard in the classroom that you may wonder sometimes if there is any hope of designing a new pattern for yourself and your students. How do you know that you can give up some of "your teaching time" to offer to your students learning alternatives that might flop? What about the (seemingly etched-in-stone) daily schedule? Are you giving up control of the curriculum and the students' learning if you hand over the reins to student tutors?

I would like to assuage these feelings for you. By looking into the real experiences of teachers and their students at work in successful peer-learning classrooms, you can begin to imagine your own possibilities. To change years of sameness, I agree, is unsettling, but it is also exhilarating when you see the new idea working well. I offer the following six diverse scenarios in which peer tutoring paid handsome dividends of learning.

Operation Saturate

Brave Woman

Following a frustrating year with 28 first-graders who had a wide range of abilities with few available sources and no teacher's aides, a friend of mine decided the next year to dive headfirst into a new instructional pattern. Almost anything would have been better than what she had just gone through.

She used the summer to read, read, read, in a university library. Something—some answer—had to be there. All that published research surely cannot have been useful for one-shot episodes of inquiry only. Some of what we learn through educational research surely can be implemented in the *real-world* classroom, thought my friend. If not, why do we even have educational research?

Over and over in her reading, the idea surfaced that children, even very young children, can think, can study, and can learn, without the droning mediocrity of round-robin reading.

Believing what she read, my friend threw all caution to the wind and planned a new year for herself and her charges—poor, unsuspecting little things! Is it not true that disequilibrium will cause us to do strange things?

Not daring to do anything too drastic without support, my friend approached her principal with all of the research that she had found to document her new, drastic assumptions. Tongue-in-cheek, heart-in-throat, hat-in-hand, she anxiously awaited her administrator's response. The principal was enthusiastically supportive! Of course, this positive response had its own fearsome results—GULP! Now there was no excuse to delay the inevitable forging ahead into the next phases of planning and implementation.

The New Classroom

The results were as drastic as the ideas had been. The classroom was totally changed: out with desks, in with tables, bookshelves, dividers, portable bulletin boards, audio equipment, tape recorders, and a Language Master. Some of this equipment was rediscovered, dust laden, in storage. No one else had found a reason to let the children play with that stuff, so it had been swept out of the way.

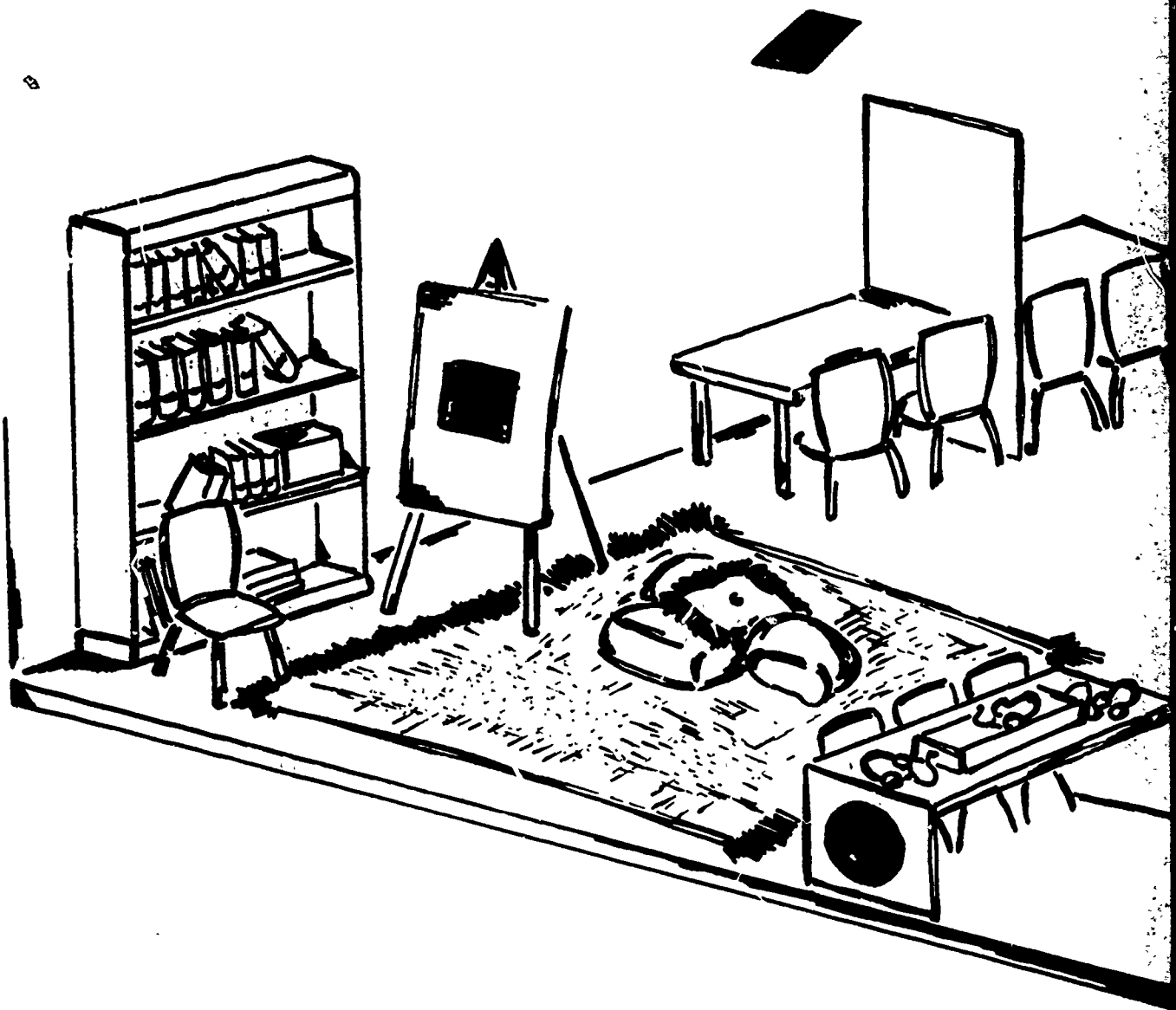
I mention the physical aspect of the classroom first because of the effect on the students when they walked back into the classroom after summer vacation. The old rows of desks were gone, and gone with them was the mindset of sameness. Their classroom had undergone a physical revolution. From the first day, their teacher was re-educating them to the "new way."

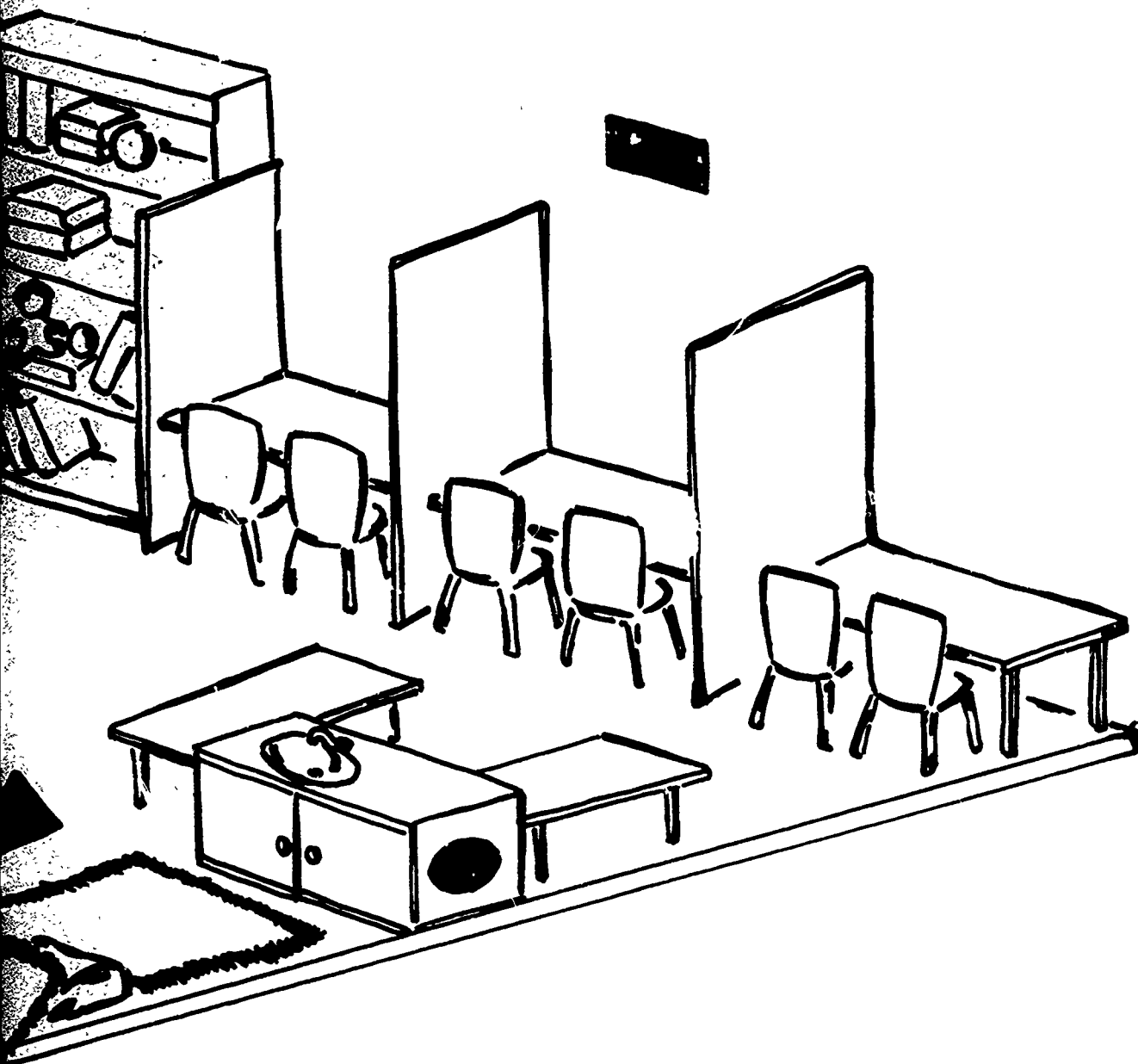
As you can see in the classroom floorplan (see p. 4-5), dividers (made of a tailor's cutting boards covered with contact paper in cheerful colors) were held in place by rectangular tables on each side. This arrangement provided study stations where peers could work along together.

The New Curriculum

As the room was restructured, so also was the curriculum. The content of the curriculum was already carved in granite by the school board; the means of delivering that curriculum was teacher's choice. My friend decided to begin the peer project in reading and language arts by drawing upon the emergent literacy of six-year-old children. The schoolboard had mandated even a series of basal readers. My friend did manage to abandon the typical basal approach. Her six reading groups would not be following the familiar pattern of basal reading groups. (More detail later.)

Schedule and rotation patterns were determined. The morning—all of it—was going to be heavy-emphasis, language-saturated, active-communication time for the whole class. So, where would the groups come in? Throw out your mental image of reading groups! The idea has been sorely misused. The class as a whole met first, seated on the carpet for auditory stimulation activities, readiness train-





ing, stories, sharing, and, yes, phonics—intense, systematic phonics. This session was fast-paced, planned, and active (not lost time mumbling over mimeo pages). Following the whole-group work, peers at their stations played word games that provided immediate application of what had been studied on the carpet. (Samples of all of the games used in these stations are in McAllister, *Primary Reading Skills Activities Kit*, see Bibliography).

Each reading group was identified by color rather than by level. Only the teacher knew each student's level of ability, and each one received the same package of words.





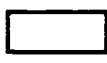

Which words were chosen? Because this was a first-grade class and the school was required to use a basal system, the first words for study were the words introduced in the readiness and pre-primer readers. These were not the only words given. Words of interest and words about topics in other areas of the curriculum, and words requested by individual students were added to the students' collections in addition to the basal words. Reading texts were not presented until all of the words could be recognized and had been used by the groups in language activities. When some students grasped the words at a faster rate, they branched into additional groups for further work. It was exciting to see them excited about reading and communication.

How It Worked

After approximately three weeks, the class had become familiar with the new procedures and activities. During this time, the teacher was discovering each child's capabilities and level of communication. Children who lagged behind in language abilities could be helped individually while others worked in pairs. The timed sessions kept the students on task. See the Time Schedule and Rotation Pattern Table (p. 7). Every 15 minutes (later this increased to 20 and 30 minutes) a kitchen timer announced that it was time to move to the next station.

Each station had a large posterboard hanging above it, each posterboard a different shape, so that the students could

Time Schedule and Rotation Pattern Table

Shapes:							
Time:	8:00-8:15	1	2	3	4	5	6
	8:15-8:30	2	3	4	5	6	1
	8:30-8:45	3	4	5	6	1	2
	8:45-9:00	4	5	6	1	2	3
	9:00-9:15	5	6	1	2	3	4
	9:15-9:30	6	1	2	3	4	5
Group Key:		(1) orange		(2) red		(3) blue	
		(4) green		(5) purple		(6) yellow	

Six reading groups were established for reading instruction, after which students rotated to designated centers to work together on tutor/tutee assignments. For the tutoring assignments, the teacher developed lessons that matched the reading instruction. Posterboards in six different geometric shapes hung above each work station to make rotation easy from location to location.

easily find their locations. All activities and games to reinforce the lessons of the morning were in place for the students' use. Three sets were provided so that six students could be accommodated at one time at each station. Every student worked with a partner at the stations on word study, language/sentence building (using sets of word cards), writing, pairing to build paragraphs with the word cards, kinesthetic/tactile activities (clay letter formation, word formation, tracing, writing of words that seemed difficult in paint or slick writing), word building with individual letter cards, reading along with a tape-recorded story, and reading to, or with, each other. The students traded off being tutor and tutee at each station, though the groups moved together.

As the students moved around the room working together, the teacher pulled aside each group for 15 minutes for direct instruction, oral reading, and/or conferencing. It was amazing to watch these first-grade children begin to blossom into excited communicators. No child had the idea that reading or writing was impossible. Each one was successful.

After the several steps of learning had been taken, and the vocabulary had been mastered, only then was the reader itself presented to the student. What a thrill to hear: "Hey, I CAN read books!" The student pairs were eagerly reading not one but several of the stories together. Books were being taken home and read to parents, fluently. There was a run on books in the library, and the corner dime store sold out of 3 X 5 cards: any unknown words—not just words in the reader—became a new addition to a student's word package. Each student bought a package of cards in September and another later in the year.

The 3 X 5 cards were kept in each student's file box with alphabetized dividers. Considerable incidental instruction arose through the process of organizing the word cards in alphabetical order. Cards with punctuation marks on them were added to each student's collection so they could punctuate the short stories they composed with their word cards. They developed short stories and learned a lot about sentence structure, capitalization, and punctuation through this card manipulation approach. Processing their language,

they used one another as sounding boards and self-correctors. It was common to hear, "You need a comma there." And, without a flair-up, the partner would correct the sentence at once. This is an easier approach than subjecting them to the mad eraser!

A Typical Morning

The bell rings. Twenty-six first-graders, grouped in pairs, bring their personal word packets and settle themselves on the carpet around the teacher. They wait for the story to begin. Today, the teacher is reading a story to the whole class. After the reading, sentences from the story, on sentence strips, are distributed to several students. The partners read the sentences, negotiate among themselves for proper position, and arrange themselves in front of the class. The class reads the sentence strips being held up by the partners. Discussion ensues about the sentence sequence. If an edit is required, the partners move to a different position.

This story is short and incomplete. Each student dyad is given a folder containing the story that the teacher read to them. Taking pencils, 3 X 5 cards, and paper to their assigned work stations, each duo gets right to work. They are to add to the story until it is finished. First, they manipulate their word cards, arranging them into sentences and using appropriate punctuation cards. They discuss the story development and change the narration or organization by moving the word cards until each member of the dyad is satisfied that the product is ready for the teacher. The teacher points out any incorrect syntax, punctuation, or capitalization, and helps the pair rearrange the words until a correct paragraph is complete. If other words are needed, the students place a blank card where the new word will go. The teacher writes the word that is needed for each student, and a new card is added to the individual word packets.

After the manipulated paragraphs are checked and corrected with the teacher, the students copy them on the paper that was provided by the teacher. The teacher has been able to address various communication problems as they arose. Thirteen stories have been completed. Later,

the student partners read their finished stories to the class. There are as many different story endings as there are student dyads. According to the verbal ability of each student, the complexity of the stories varies considerably.

Following this part of the morning, students are assigned to stations to work on other assignments—using game activities—that the teacher has identified as needing practice during group meetings. While the groups are following the schedule from one activity to another, one group is with the teacher for individualized, new instruction, or reinforcement.

The word cards are manipulated in many instructive ways. They are used to identify beginning, middle, and ending sounds. They become tools for teaching alphabetizing during whole-group instruction. The teacher is able to observe each student processing information and making decisions; she can, therefore, identify any who need individual help. Tutors are assigned to tutees in need of help. More functional practice gets going. Writing—even personal imaginative writing—develops smoothly among these first-graders. Invented, incorrect-though-close spellings are lessened. Using the word cards as signposts, the students learn and remember correct spelling quickly. By not guessing at word spellings and by avoiding internalizing invented renditions, they bypass having to unlearn incorrect word perception and relearn correct word form. Why allow wrong word form to be internalized before doing something about it? It is much easier to learn the correct spelling first than to get the mental image of wrong spelling and then have to replace it later.

Results

After my friend's first year of peer tutoring success in first grade, two other teachers decided to try peer pairing using manipulated word-card language development as a teaching strategy. They undertook a formal study with two experimental groups and two control groups, traditional in nature and operation. After eight weeks, word recognition of the experimental groups was remarkably and reliably greater than that of the control groups (with $p < .002$ statistical significance).

Scenario Two

Peer Tutoring in Spelling

Poor Spellers

Maheady and Harper reported on a peer tutoring project that came out of four teachers' desire to make a difference in their students' spelling performances. Two third-grade and two fourth-grade classes took part in this effort. Of the third-graders, 73% had been achieving below grade level in spelling, and 52% of the fourth-graders had been achieving below grade level in spelling in their traditional classroom setting.

Following the usual blocked curriculum, these students were exposed to a daily spelling period of 30 minutes, using a very structured spelling program. These four standard classes used a commercial spelling program that followed a basic instructional pattern each week. Monday, new spelling words were presented, followed by workbook activities, Tuesday through Thursday. The weekly spelling test was administered each Friday. The only activity by, or feedback from, the students occurred when they wrote the words that were dictated by the teacher and used in sentences. The only response from the teachers was a numerical grade resulting from the number of correctly spelled words. Each week's list of words stood independently of the other week's word lists. There was no carryover, and few spelling words were retained across the weeks.

Needless to say, using this traditional system to teach spelling was boring for students and teachers alike. Thus, the teachers decided to put spark into the subject. They embarked on an active tutoring program that involved all of the students in both grades.

Good Spellers

The pattern of tutoring used in the new spelling project included competition between teams. On Mondays, each class was organized into teams, randomly selected. The stu-

dents on the teams were randomly paired by the teachers for tutoring. The dyad groups worked together through Thursday on the week's list of spelling words. The teachers used a kitchen timer to signal 5-minute intervals.

The tutors were trained by the teacher to use a visual-auditory-kinesthetic procedure with their tutees. As a tutor dictated each word, the tutee simultaneously wrote and orally spelled the word. Tutors were to offer instant verbal feedback, such as, "that's right" and "correct," and they were to give the tutees two points for each correctly spelled word. When words were misspelled, the tutors said so, and provided the tutees with a correct spelling. After writing the misspelled word correctly three times, the tutee was given one point when the word was correctly spelled. As many words as possible were covered during each 5-minute interval. When the timer sounded, the students switched tutor/tutee roles, and the same procedure was followed.

Daily, the teachers awarded bonus points to tutors who exhibited good tutoring behaviors. These behaviors included clear and accurate pronunciation of words, appropriate use of the misspelling/correction procedure, and accurate delivery of points.

The weekly spelling test was administered on Fridays, and students could earn three points for their team for each word spelled correctly on the test. Teams with the highest scores were given a "Team of the Week" certificate, posted for all to see.

Results

Positive results were noted instantly. After classwide peer tutoring was initiated, the mean percentage of words correctly spelled increased 12 points, and was maintained. When class-wide peer tutoring was withdrawn for a period of one week, each classroom mean score fell to below 90. When peer tutoring was begun again, each class again achieved a mean score of 90. This increase continued during the 17-week program, resulting in mean scores greater than 90 for each classroom.

Cross-age Peer Tutoring in Reading

Older Tutors, Younger Tutees

The fourth-grade teachers in a large elementary school in Orange County, Florida, embarked on a project to identify a viable means of raising the reading levels of students who were functioning two years below grade level. With the help of the reading specialist, ten fourth-grade students were chosen to be recipients of tutoring. These students were tested individually to determine their oral and silent reading levels before instruction was begun. Before tutoring, the range of reading levels was 2.0 to 3.5 in silent reading and 2.0 to 4.0 in oral reading. The Silvaroli Informal Reading Inventory, Form A, was used to obtain oral word recognition and comprehension levels. The Houghton-Mifflin Silent Reading Placement Test was used to determine each student's silent reading level.

Sixth-grade teachers selected ten tutors to work with the fourth-grade students. The tutors were trained by the reading specialist to use the Neurological Impress Method (NIM). The training took three sessions. The tutors practiced with one another, each taking turns at being both tutor and tutee.

The fourth-grade and sixth-grade teachers adjusted their schedules in order for this project to be implemented. The sessions took place daily for 12 weeks during a period of 15 minutes of intense application of the NIM. The reading specialist was present during each session to act as monitor and facilitator.

Both tutor and tutee signed a contract, agreeing to check in with the reading specialist on a daily basis. The cafeteria was used during the sessions so that the dyad groups could spread out while reading orally and not bother any other partners. Library books selected by the fourth-graders were kept in a cart and wheeled to each session. Book markers were placed in the books and dated at the end of each session. The numbers of pages read were also recorded. As

the students checked in, the tutees picked up their books, and the partners arranged themselves at tables. When all were ready, the signal was given, and each dyad read simultaneously for 15 minutes without interruption.

In Your Ear

The NIM is a unison reading procedure in which the students read aloud quickly and simultaneously. It is especially suitable for students who have not profited from intensive phonics instruction during the primary grades.

The tutor and tutee jointly hold the book. The tutee sits slightly in front of the tutor so that the tutor's voice is directed into the tutee's right ear at close range. The tutor slides a finger along under each word as it is read aloud together with the tutee.

During the simultaneous reading, as few pauses as possible are taken. The tutor attempts no sound- or word-recognition instruction; the tutee is not corrected at any time and is encouraged to refrain from stopping on difficult words.

Results

Both the teachers and students were delighted with the effects of this endeavor. All the students asked if they could extend the time or read twice a day. The teachers reported that self-esteem blossomed. During the day, at "down times" and when work was completed, the fourth-graders would choose to read a book above any other activity. They talked together about plots and characters. Their attitude during reading instruction changed from reluctant hesitancy to eager participation. Most importantly, these pupils thought of themselves, for the first time, as readers "like everyone else."

The sixth-graders also grew in self-esteem. They were excellent models for their younger charges who looked up to them; they also would have liked to continue the tutoring. Several tutors said, "I want to be a teacher when I grow up." The tutor/tutee dyads developed bonds of friendship

and support. All the students showed enthusiasm about their improvement in reading, and said so clearly.

At the end of the twelve weeks, Form B of the Silvaroli Informal Reading Inventory and the Houghton-Mifflin Silent Reading Placement Test were administered to the fourth-grade students. According to the test results, the 12 weeks of intense reading involvement yielded academic growth in reading. Gain in oral reading was three grade levels in word recognition, and two grade levels in comprehension. Growth in silent reading comprehension ranged from almost one-half grade level to one and one-half grade level.

Prior to tutoring, the mean oral word/recognition was 2.7; oral comprehension, 2.4; and silent reading, 2.5. Post-test scores were as follows: word/recognition, 4.1; oral comprehension, 3.5; and silent reading, 3.5. As few as 15 hours of tutoring resulted in the following mean gains: oral word/recognition, +1.4; oral comprehension, +1.1; and, silent comprehension, +1.0.

The teachers and students were amazed. A mere three months of focused practice had yielded a whole year's worth, and more, of reading growth. The teachers knew that NIM-style simultaneous reading could easily be included in the ordinary classroom during the developmental reading period, in lieu of ditto seatwork.

Reciprocal Peer Tutoring

Tutor  Tutee

A first-grade teacher wanted to reach more students with individualized instruction. Assigning students in higher grades to be tutors was not possible because of scheduling problems; in first grade, students who had mastered the first-grade content were not yet available. Every student in the class needed individualized help. The only way to offer this help to each student was to let every student be a tutor as well as a tutee. This first-grade teacher set up a classwide reciprocal peer tutoring program for 28 students on a systematic daily basis. All students received direct instruction, and each student was tested for sight recognition of 112 words taken from the basal readers. Five students recognized 30 or more words. The others recognized zero to 13 words. The fourteen students who scored the highest on the word recognition test were identified as the tutors.

Folders containing 10 flash cards printed with the words that the tutees did not know were supplied to each tutor. All tutors met together to practice the words they would be teaching. Five-minute sessions were allotted for this review and confirmation step. As each tutor read the words correctly, the other tutors responded with "yes." If the word read was incorrect, the others told the reader the pronunciation or asked the teacher for help.

While the tutors were practicing together, the 14 tutees were working on teacher-assigned tasks that were not related to the peer tutoring program. When a timer sounded, the tutors began working with their tutees.

Tutors and tutees alike were trained to use tutoring behaviors. The teacher used transparencies to describe appropriate tutoring behaviors. Practice consisted of role-playing with another student tutor, and tutor-tutee practice sessions with the teacher offering assistance, when needed. The time used for this training was invaluable for the success of the program. The students used the tutoring

methods effectively for a 5-month trial period without needing retraining. Praise and gold-star stamps were used by the teacher to reward proper tutoring behavior.

Following the tutors' review sessions, the tutees joined their tutors to practice their words for five minutes. The tutors showed each word card, and had the tutees read them as many times as possible during each five-minute interval. Then the words were shown once only as a test, with no prompt or feedback offered. At the end of the session, the tutor recorded the words that had been learned by the tutee.

During tutoring, all 28 students showed consistent growth in word recognition. Words that any student missed on the pre-test, and the words that had not been encountered during reading instruction, were used during tutoring. The teacher resumed reading groups after three weeks into the peer tutoring when she observed that students began to read correctly the new stories in their readers even though the vocabulary had not be taught. The class was able to spend more time on comprehension development, word meaning, and discussion. Also, students learned organizational skills, and self-discipline improved.

Eleven weeks after the peer tutoring program ended, the Gates-MacGinitie Reading Test was administered to all 28 students. On comprehension, the class grade-level mean was 2.4, or the equivalent of second-grade, fourth-month reading level. The vocabulary test yielded a class grade-level mean of 2.7, or a second-grade, seventh-month reading level. These results confirmed that these first-graders involved in the peer tutoring program were reading at or above their placement level.

Peer Cooperation in Reading and Comprehension

CIRC

Cooperative learning and peer teaching can meld into an effective strategy for reading and writing instruction. Research from Johns Hopkins University offers samples of how cooperative learning and peer teaching can be used in an integrated manner during instruction based on basal stories. The program is called Cooperative Integrated Reading and Composition (CIRC). In two field experiments, third- and fourth graders worked in heterogeneous, or mixed ability, teams for reading, language art, and writing.

In the CIRC program, the teacher supplies initial instruction. After this instruction, the students group to work together in teams of four or five members on the material that has been presented, using various modes of activities. Students may work on specific items and check answers together; they may employ a drill pattern and trade places as tutor and tutee; they may discuss comprehension questions or develop their own inquiry for further study; or, they may practice oral reading together. The content and objectives of instruction determine the most effective mode of follow-up practice. These language-active opportunities replace the unsupervised, dull, lonely seatwork that usually follows reading-group time; the result is reinforcement of instruction in an interesting and motivating manner.

During these experiments, the follow-up time activities were coordinated with the reading-group instruction using basal readers. A team-reward structure was employed in which students could earn certificates or other incentives based on the accomplishment of each member of the team. The students' time-on-task increased because of the peers' need to focus on a common goal. Each student had

an individual purpose in seeing to it that all partners mastered the assigned material.

The oral reading component during follow-up time increased opportunities to read aloud and to receive needed feedback by having peers respond to one another. Oral reading increases the students' ability to decode words with automaticity, thereby, allowing them to focus attention on meaning. During traditional round-robin reading, second-graders read aloud only approximately 90 seconds per day, on average. This results in a lot of wasted precious time for application of word-attack knowledge. By contrast, students in the CIRC program enjoyed oral reading for about ten minutes each day.

One of the major concerns addressed in the CIRC program was that of helping students learn *broadly* applicable comprehension skills that are measured by standardized tests. Going beyond literal comprehension, interpretive strategies and metacognitive controls were built into this component. During follow-up periods, paired students worked to identify features of a story, such as characters, setting, problems, and solutions. The students also made and explained predictions about resolving the problems, and they summarized main elements in the stories.

Another component of the CIRC program was the use of the writing-as-process approach with peer response groups. The students themselves planned, revised, and edited their compositions with teammates. The instruction in grammar and mechanics blended with reading and comprehension through time-on-task, focused writing.

A Typical Period of CIRC

All instruction began with the teacher. Basal stories, decoding, vocabulary, and comprehension were introduced during 20-minute reading group sessions each day. Moving a step beyond the traditional Directed Reading Activity presentation, structural components, such as characters, setting, and problems, were given. Group activities were

opportunities for the students to make and support predictions about the problems in the stories and their solutions.

After the group session, students were supplied with activities to do as teams. The activities related specifically to the group instruction, and they followed the sequence given here. First, the students read the story silently, then orally with a partner. Halfway through the story, they stopped to describe the characters, the setting, and the problem in the story. Next, they made predictions about how the problem might be solved. They studied words in drill fashion, studied word meaning by using the dictionary, paraphrased the definitions, and wrote sentences. Finally, they summarized main ideas with a partner, and pre-tested one another on the week's spelling list and work.

When all activities were completed, each student checked and initialed the partner's assignments. They were allowed to work at their own pace, but the number of activities required was set by the teacher.

Tests were administered after the third class period. The students were required to answer comprehension questions, to write each vocabulary word in a meaningful sentence, and to read each word aloud to the teacher.

One day each week, direct instruction on identifying main ideas, drawing conclusions, and comparing and contrasting was given. Students practiced these comprehension and metacognitive strategies by working together on reading comprehension worksheets and games.

Language arts and writing instruction were integrated. Teachers delivered direct instruction on writing complete sentences and paragraphs, narratives, descriptions, and other genres. Language mechanics were presented as aids to improve writing, rather than as separate skills; for example, when studying modifiers, descriptive writing was practiced.

Writing was taught as a process. Students used peer editing forms to edit content and grammatical correctness of their

compositions. The peer partners shared constant feedback during writing.

Another strong component of the CIRC Program was independent reading. Students were required to read a book of their choice every evening for 20 minutes. Parents initialed forms to document the reading, and points were added to the teams' scores.

Results

The first field experiment of the CIRC program included third- and fourth-graders. The students came from 10 schools in a suburban Maryland school district, and were divided into 11 experimental, and 10 control, classes.

Results from these experiments yielded significant achievement growth in favor of the experimental classes in reading, vocabulary, comprehension, language expression, oral reading, spelling, and writing.

Since the first experiments, numerous teachers have employed the CIRC program in their classrooms. This use of peer involvement as a part of, rather than in addition to, regular classroom instruction and practice, has proved to increase student achievement in all facets of language, even for young elementary students.

Peer Teaching at Eldersburg

Improving the Environment

A program was developed at Eldersburg Elementary School in Carroll County, Maryland, with a first- and fifth-grade team leader and 50 first- and fifth-grade students. To fulfill the school goal of improving school "climate," teachers recognized the need to foster respect and responsibility among all students. They wanted the fifth-graders to realize that the first-graders, as well as themselves, had an interest in the school.

For starters, students from the fifth grade enjoyed social activities with the first-graders; however, this association quickly developed into a peer-teaching environment. The fifth-graders were responsible for planning a party each month for their "little brothers and little sisters." The students began the program with a get-acquainted cookie party in September. While observing the children, the teachers realized the potential to expand this program into a reading/writing environment that would benefit both first- and fifth-graders.

As the months advanced, through a Halloween party, a Thanksgiving skit, and a sharing of Christmas letters, numerous benefits were noted. The older students developed an appreciation for six-year-old thought and a tolerance for errors made by the first-graders. This involvement gave the fifth-grade students opportunities to edit the first-graders' writing products. The first-graders were not ashamed to make errors in front of their fifth-grade tutors, and excitement for learning became evident on both sides.

Leadership skills developed, and responsibility for the first-graders in other areas of the campus was fostered. The first-graders looked to the fifth-graders as role models. Camaraderie formed between these students, and suggestions

from their older peers were received by the first-graders with enthusiasm.

A Valentine party, a kite flying day, an April playday, and an end-of-the-year barbecue resulted in the realization that this program ought to continue year after year. The scrap-books, journals, work papers, learning stations, and art activities were proof that the program had far exceeded its initial goals.

Getting Down to Work

In subsequent years, the focus was less on social activities and more on instruction and learning. Fifth-graders actively provided reinforcement and one-on-one instruction for first-graders. Many constructive activities evolved.

Fifth-graders wrote pen-pal letters to first-graders, and they helped them write pen-pal letters to other first-graders in a foreign country. This afforded more activities for writing and editing. The fifth-graders assisted their younger peers through the processes involved in letter writing.

In December, the fifth-graders served as Santa's helpers and wrote letters back to each first-grader as elves. They also helped the younger students make presents for their parents.

The tutors provided other language enrichment by helping the first-graders write and polish recipes for inclusion in a first-grade recipe book. They wrote language-experience stories with the younger children. Language-experience stories are stories that the first-graders dictated to their tutors. The tutors wrote down the exact oral discourse, and then they worked with the younger students to polish the product. Also, they contributed to a message center where first-graders and fifth-graders wrote notes to each other; they helped the first-grade tutees write in personal journals, and, in return, the tutors received ideas for writing in their own journals.

The sessions of paired work crossed other curricular areas. Fifth-graders promoted understanding of spiders and webs by cooperatively researching, and then constructing, webs with yarn and coat hangers. A math carnival and a

readathon were staged for first-graders. The older students helped with science experiments in a hands-on approach to teaching science.

The program was easily implemented and amply supplied with materials, volunteers, activities, and enthusiasm. The only problem experienced was time allotment. More time was needed because first- and fifth-grade schedules allowed only for a half-hour per week of tutorial time.

Special projects were worked into the schedule, but the ideal would be to have the program operate on a schedule two or three days a week.

Results

The program proved contagious, and that was a further benefit. The program began with one fifth-grade teacher and one first-grade teacher. It grew to involve all first- and fifth-grade teachers in the school and all of their students. Teachers in other grades also expressed a desire to develop similar programs for their students.

The Eldersburg program continues to excel. The teachers continually find new avenues to explore and develop for the students. When a faculty works cooperatively toward student and teacher involvement, the entire school population benefits.

Peer Teaching & Collaborative Learning

What is Peer Teaching?

Peer teaching is a process by which one pupil with minimal training, but adequate competence, and under a teacher's guidance, helps one or more students learn a skill or concept. The successful use of peers to help one another supplements classroom instruction both of the tutors and the tutees.

Peer teaching is a congenial agreement between students to study and learn together. One student may be responsible for the teaching and learning of another student. This cooperative learning situation requires that the students understand the purpose and the intended outcome. When setting up a cooperative learning arrangement, the teacher identifies the focus of instruction and the appropriate instructional mode.

The History of Peer Teaching

Classroom use of older children to help younger students began during the 18th century in England. During the mid-19th century, William Towle, a Boston educator, wrote *A Manual of Mutual Instruction* in which he detailed specific tutorial procedures and materials and a monetary reward system of incentives.

Joseph Lancaster was another master teacher who trained groups of students to assist teachers under his supervision. He would teach a lesson while student assistants observed his technique. The assistants then taught the lesson to 20 other students. In 1918, Lancaster introduced this system in the United States and used it effectively for thirty years. Parents questioned the system, however, arguing that students who were tutored by other students received a second-class education.

As the American institution of the one-room schoolhouse was spreading into farming communities and small towns,

teachers faced a wide range of ages. It made good sense to assign younger students to older students for instruction.

When teachers began to specialize in professional education, pairing peers for instruction was abandoned. Classes in larger schools were divided into grades, and homogeneous age-grouping became the pattern of assignment in classrooms.

From 1900 to 1960 there was little mention of peer tutoring. By the 1960s, however, peer and cross-age pairing for the purpose of one student teaching another surfaced again. Postwar mobile populations had resulted in a wide range of abilities in classrooms. This heterogeneous student population imposed a greater need for new educational methods, teaching techniques, instructional materials, and support services. Then, in 1957, Sputnik triggered a resurgence of peer teaching. An urgent need was felt for equal education for all, and in a hurry. At the same time, the decreasing educational performance of urban children further heightened awareness of the need to address their lower achievement. Out of this double urgency, volunteer tutoring and paraprofessional programs came into being. A new outgrowth of children teaching children arose from this situation.¹

The need for more individual help for students continued to grow, and the decades of the '70s and '80s yielded greater awareness of the need to work individually with students. An increasing population of diverse abilities and needs, coupled with the increasing complexity of the task of teaching, placed ever greater demands on the teacher's time and energy, while more and more of the teacher's day came to be allocated to administrative, non-instructional functions of accountability.

Numerous federally funded projects centered on these special needs supplying paraprofessionals to learning disability programs, special education programs, "Chapter 1" programs, and Head Start. The funding, however, did not,

¹Cohen and Kulik, 1981; Cohen *et al.*, 1982.

usually trickle into the ordinary classroom for the public schoolteacher's use.

What is Collaborative Learning?

Cooperation on an identified task eliminates competition, which otherwise might tend to separate and divide colleagues. Cooperative learning in a classroom brings students together in a common purpose. Being paired with a peer to succeed in a common goal nurtures a caring attitude in students toward one another's interests. Students can either be paired or organized in small groups of four. The mutual support can give the least able student a feeling of immediate and constant help, assuring greater success. The uses of cooperative learning are endless. Students paired or in groups may work in laboratories to complete class projects, take part in discussion groups, or prepare for a debate.

The Background of Collaborative Learning

Social psychologists since at least the 1920s have conducted laboratory studies on the effects of cooperation *versus* competition. They have documented that when people work together toward a common goal, many positive outcomes result. The partners working together towards one goal turn outward to other class members; they are concerned with the other members' success as well as their own. They are able to generate more productive ideas and products because more and better energies come from sharing and brainstorming.

Research on effective cooperative learning in the classroom began in the early 1970s. Since that time, researchers have continued to study practical applications of cooperative learning methods in elementary and secondary classrooms.

Robert E. Slavin of Johns Hopkins University, Baltimore, Maryland, researched and developed cooperative learning techniques. Two of Slavin's techniques require student teams of four members. In the Student Teams Achievement Division (STAD) experiment, four students of mixed ability were assigned to teams. The teacher presented a lesson;

then, the teams learned the lesson together. Later, each member took a quiz, the scores of each member contributing to a composite score. Grades improved for all students in these teams.

Another four-member team technique is the Teams-Games-Tournament (TGT). The same teaching and teamwork exist as in the STAD arrangement, but the quizzes are replaced by weekly tournaments between teams. The highest scores win certificates. Students who were involved in team groups improved more than those who were not involved with peers.²

Team cooperative learning can be combined with individualized instruction. One example of this use in language arts is Cooperative Integrated Reading and Composition (CIRC), discussed above in "Scenario Five," pp. 18-21.

Types of Student Tutors

Peer Tutors

Peer tutors are students of the same grade level who work together, cooperatively, one-on-one. They may pair up on an ad-hoc basis with identified tutors assigned to work on a specific skill or assignment, perhaps during a scheduled instructional period. The teacher may ask a capable child who has mastered the instruction to help another child during a tutorial session.

An alliance between peers develops camaraderie and strengthens self-worth. The tutor is a model of appropriate social behaviors as well as of academic skills. The two partners share the commonality of classroom context. The act of being helped by a friend is cooperative rather than competitive; it often has the effect of bringing out a quiet or withdrawn student.

²Slavin, 1987.

Cross-age Tutors

Cross-age tutors are usually older students in a higher grade level who work with younger students. For instance, a sixth-grader may help a fourth-grader either in developmental or remedial tasks. This sixth-grade pupil does not have to be reading on a sixth-grade level to help a younger student in reading. The sixth-grade pupil who may be reading at a third- or fourth-grade level is also helped by the experience. The tutor has to bone up on fluency and skills in order to teach a younger child. As every teacher knows, teaching is the best way to learn. Both students receive additional reinforcement, ongoing review, motivation, and the incentive of success.

Analysis of Peer Teaching

The tutoring experience is private and intensively interactive. The learner is afforded undivided attention.

Opportunities for reflection and instant correction of misunderstandings lower performance anxiety. Addressing the analysis of peer teaching to the effect of the act upon each member of the dyad, one can view the results as an interplay of such variables as tutor-centered, process-centered, situation-centered, and tutee-centered aspects.

Tutor-centered aspects include the effect of the teaching role on the tutor. A student enjoys the elevating feeling of being asked to play the role of teacher. Being asked implies that one must be "good enough" to teach; self-esteem is thus positively affected. The act of tutoring develops academic skills by further enhancing self-esteem. Also, with the elevation to "teacher," the tutor enjoys a moderate measure of control over the input and the product of a lesson. With this control comes responsibility for the achievement of a fellow classmate. When the student feels more control of the learning situation, a "willingness" to study hard and to take responsibility results in the tendency to be more academically successful. The tutor, active in the teaching process, becomes more active in the learning process.

The **process-centered** aspect of tutoring is equally important because practice and application of the new skills to later lessons can be expected. Both tutor and tutee are rein-

forced and encouraged. The tutor experiences a growing insight into subject, self, and teaching and learning. Students learn far more when performing the teaching role than they do when acting as the student in the classroom.³ Understanding and knowledge of the subject are improved by verbally instructing the tutee. Demonstrating the skills and knowledge to the younger student raises the tutor's self-esteem and confidence.

Another outcome of the act of tutoring is an identification of the problems and processes of teaching that are directly related to learning. By observing another student in the act of learning, the tutor can stand back and gain greater insight. This new degree of objectivity involves an awareness of patterns of learning, prior experience, and "how" he or she mastered the same material. Every child can profit from being given the opportunity to play the role of the teacher.⁴

The **situation-centered** aspects of tutoring include time-on-task, relearning, and selection of materials. Tutoring affords the tutor more reasons and opportunities to study the subject. Most cross-age tutors teach material to which they have been exposed and were expected to learn. Tutors spend more time on the activity and in working with instructional materials than non-tutors do. Thus, time-on-task, relearning, and selection of appropriate materials become significant variables.

The **tutee-centered** aspect of peer teaching addresses the act of receiving instruction rather than giving it. The learner is given one-on-one aid that zeros in on a real need. The act of working with a peer is encouraging and less stressful because another student, who is closer to the problem (by being a learner also), identifies with the tutee in ways that the teacher does not.

³Nevi, 1983, p. 893.

⁴Nevi, 1983, p. 896.

Economics of Peer Teaching

With the rise in per-pupil cost of a formal education, effective low-cost or cost-free programs that will increase the academic achievement of students are welcome windfalls. Peer teaching is such a program.

It seems that to get help, a student must first fail. Federally funded programs address only students who have been identified as having special learning problems. Even instructional resource labs in math and reading siphon off a particular group of students to serve in sporadic one-shot periods removed from the context and content of the classroom. These programs do not meet the masses in overcrowded classrooms.

Computer Assisted Instruction, programmed texts, and self-paced instructional materials are effective when used in individualized instruction, but these methods have limited applicability in the early grades. Students must possess prerequisite skills to make independent use of these learning systems. None of these technological approaches gives the prompting, personalized feedback, and praise that are so important during the beginning stages of learning. Direct one-to-one instruction is the most intensive and the most personalized of all styles of teaching and learning.

A comparison of several types of supplemental instructional services reveals that peer teaching is both the most cost effective and the most person effective of all teaching methods.⁵

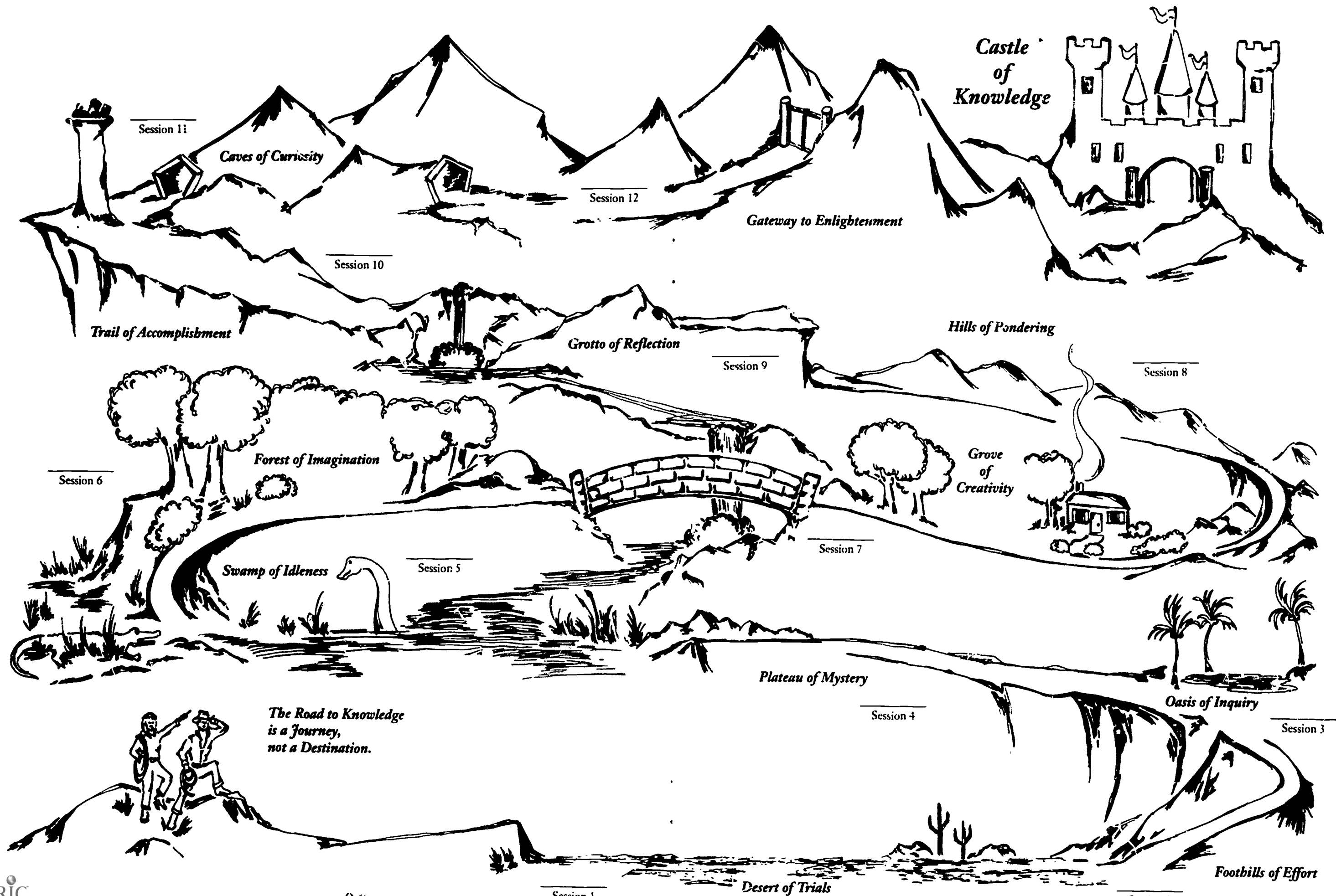
⁵Cohen and Kulik, 1982; Heward, 1983.

The center fold map of "The Road to the Castle of Knowledge" on the next two pages has been specifically designed for classroom use.

You may remove it from the staple binding without tearing it, and photocopy it so that each of your students may have an individual copy of the map.

As students accomplish some new stage of learning, invite them to keep track of their progress with gold stars or smiley faces, unless you have something a little wilder.

The "Pilgrim's Progress" motif reflected in the exotic place names—"Grotto of Reflection," "Oasis of Inquiry"—is an out-and-out invitation to vocabulary building.



*The Road to Knowledge
is a Journey,
not a Destination.*

Peer Program Organization

Peer tutoring and learning can be structured in many forms. Any organization pattern requires thought, talk, and cooperation, but the time taken to implement an effective program that meets the individual needs of each student is well worth the effort. Many possible choices of organization patterns are available to teachers and schools, including resource tutoring, classroom tutoring, tailored tutoring, and ripple tutoring.

Resource Tutoring

Three or four student pairs are scheduled to work together in the resource room at the same time. Each tutoring session usually takes 15 to 20 minutes, and supervision by an aide is required. One advantage of this form of organization is that a resource person is responsible for monitoring the groups, leaving the aide free to be totally available to answer questions or help with materials and equipment.

Some schools that use resource tutoring schedule classes on a rotation basis by grade level. Grades one and two may be assigned during the first quarter of the school year, the subsequent quarters being then assigned to grades three and four, and grades five and six, respectively. During fourth quarter, kindergarten pupils can be served in short sessions, paired with older student tutors.

The logistics of managing resource tutoring can become difficult. Each class may be scheduled at a particular day and time, five days a week, so that all student teams have a chance to be involved at least once each week. This does require pull-outs, removing students from the classroom, as does any other lab or resource situation. The cost for an aide to manage the stream of changing groups is another factor to be considered.

Classroom Tutoring

To overcome the disruption of pull-out tutoring, the entire class may be involved. In most instances, cross-age pairing is used. Teachers in two grades agree to set aside a particular time and place for the tutoring. An effective pattern for pairing is to have sixth-graders work with fourth-graders, fifth-graders work with third-graders, fourth-graders work with second-graders, and third-graders work with first-graders.

Since one room may not hold all of the students from two classes, half of the tutors go to the lower-grade classroom, and half of the tutees go to the upper-grade classroom. The teachers monitor their respective homerooms.

Experience shows that meeting twice a week for 30-minute periods yields the best results. As a few minutes for travel and setup are also required, the time allotment for teaching and travel should be about 45 minutes.

Total class tutoring requires less outside assistance than does resource tutoring, costs less, and is easier to schedule and maintain.

An alternative pairing—peer tutors—pairs students of the same age in the same classroom. The logistics required in this case is arrangement of the room to accommodate the dyad groups. The physical aspect of room arrangement can make the venture a positive and effective one, or one that is too much hassle to continue. Logistics must not be left to chance.

If the classroom is arranged in tutorial centers or learning stations, the transition is simple. The paired students can be assigned an "office" space with chairs turned so that the rest of the class is out of view. If separate, movable tables or desks are used, the two partners can turn them to face each other during the session. The floor is another area of possibility. Floor centers with rugs or pillows offer informal getaways for tutoring sessions. A combination of these ar-

rangements would yield any number of workable tutoring stations (see diagram, pp. 4-5).

Be flexible in choosing the subject content for each session. Try rotating according to need. You could perhaps start the year with intense tutoring sessions immediately following reading and/or language-arts instruction. In each session, include practice on, and materials similar to and incorporating, recent instruction. Instead of assigning homework to be completed at the end of a tiring day, give the students in-class time to internalize, retrieve, and use the new knowledge. Memory of your voice and modeling as teacher is fresh in the tutors' minds. By the time they get home, and have eaten supper, children tend to forget what the teacher said. I describe a sample class using this model of in-class tutoring in "Scenario One," pp. 2-10.

Tailored Tutoring

In tailored tutoring, the teacher chooses a criterion by which to pair students. The most common criterion involves cross-age pairs, although peer pairs can be utilized with this pattern.

When using cross-age students, the maximum benefit is achieved when tutors teach students who are at least one year below them in reading ability. Students reading at the third-grade level would work with students reading at the second-grade level, and so on.

If reading is taught to groups of matched ability, the students can be paired for tutoring with students of higher or lower ability. Students who have mastered a particular concept or skill can work with a peer in or out of the same ability reading group on that skill. This arrangement structures ad-hoc, flexible groups that change frequently and according to need.

The criterion that you will use to pair students with peers will be based on identified instructional needs of the students. It will be determined by your instruction and by the students' achievements. If you are working on vocabulary, word recognition, or sentence analysis, that is what the tutor will teach. A student who has mastered the skill will

help a student who has not yet mastered it. While the paired teams work together, you, the teacher, will be free to teach another group or observe and evaluate the tutoring sessions.

Ripple Tutoring

The structure of ripple tutoring allows a school to begin slowly with only a few groups. The program gradually expands until all students and teachers are involved. This is a cross-age pattern in which two-to-four students in an upper grade are trained to tutor students in lower grades. As the tutors gain confidence and experience, each, in turn, trains another student to tutor. The ripple effect continues until each pupil becomes a tutor.

Administration and faculty need to work together, and enough time is necessary to include all students. Before the onset of this plan, teachers need to talk together—a lot. Plans for when to begin, how and when to train tutors, the pairing assignments, and the logistics of class mobility must be addressed. Each teacher must be comfortable with all aspects of the agreed-upon strategy.

Whatever structure is chosen, you will need to brainstorm and plan, plan, plan. In any tutoring program, tutors need some form of training about each aspect of their "teaching" activity: the learner, procedures, techniques, use of materials, the classroom's physical arrangements, location of materials, and scheduling.

How to Get Started

Selecting Tutors and Tutees

When a teacher decides to attempt tutoring in the classroom, the decision has usually come as a result of being dissatisfied with the pace of learning. Students who are not progressing as well as expected need intervention early, before the gap of learning widens past helping.

The place to begin is with those most in need and those who are eager. During socialization activities, observe the leader types: high achievers make good tutors. Avoid choosing tutees who are the lowest achievers or who have severe learning problems.

Some teachers have started successfully with children who had behavior problems in class, finding that the additional attention and involvement as both tutor and tutee were positive inhibitors of some negative behavior. In any case, start with a few rather than with the whole class, and add others gradually. The tutors may be volunteers or those whom you have solicited. Emphasize, however, that everyone will eventually become involved.

When matching students, consider personalities and achievement factors. You can obtain clues by observing during social activities and peer interaction. Avoid pairing low-achieving tutees with high-achieving tutors. Within a single class, match top students with average students, and average students with lower ability students. If you are pairing with another teacher in a higher grade, pair the top half of the upper-grade students with the top half of the lower-grade students, and the lower halves of each class with one another. Once the students are selected, give them time to get acquainted before tutoring begins. Both tutor and tutee might interview each other to discover mutual interests.

Designing an Appropriate Program Organization

The type of school organization in which you teach will be a deciding factor when designing a workable program. The physical layout of the site, the availability of space and materials, and the interest of other faculty members will lead you to the most effective program for your class and students.

Your administrator must be included in the planning and implementation of the program. They are the overseers of the total school context and can be enthusiastic supporters. Principals can help you acquire space, materials, and aides. Be sure to include them in all decisions relating to the tutorial program.

A single school might house different tutoring patterns. Some teachers may prefer to work independently within their own classrooms. Others may prefer a buddy system with another teacher from the same grade or from another grade. In any case, commitment is a necessary component—an effective program does not “just” happen. Planning both serves as a prevention measure and assures smooth implementation and a positive outcome.

After conceiving the appropriate program design for your school, grade, or class, give thought to convincing your students and parents of the value of tutoring. When parents are informed and allowed to become involved, many benefits result. Parents often volunteer as monitors or checkers to keep the flow of movement between classes running smoothly. Volunteer parents on hand can have the materials and schedule ready for the paired students. Parents can observe the sessions and answer questions that may arise; they can evaluate progress in general and give you specific feedback about their own child's involvement in the tutorial program.

Once the program is designed, specific plans and preparations must be made. Instructional areas are to be established, measurable goals and objectives determined,

and style of evaluation chosen. Tutoring procedures need to be specified as to selection, training, and scheduling.

As your program goes through its initial implementation phase, the time to begin is not the only factor to consider. Establish checkpoints for mid-course evaluation of the program itself, and be prepared to make changes as needed. At first, keep things comfortable by staying in the formative evaluation mode.

Tutoring programs rarely meet their potential for success if the coordination tends to be informal and an "add on" to the responsibility of one interested teacher. Careful planning and explanation of the benefits of the tutorial endeavor will yield positive outcomes. Schedule regular teacher/teacher and teacher/student conferences at every stage of the operation.

Training Tutors

Tutors need to be given a general overview of what tutoring is, its values and goals, what to do during a session, and how to help the tutee. Here are some suggestions for tutor training:

Explain that the tutor must establish a friendly relationship with the tutee. The tutor needs to make the tutee feel important and successful, and anticipate problems that the tutee may have. One way the tutor can learn these skills is by practicing the teaching techniques modeled by the teacher.

Provide the tutors with a sheet of directions for each session. This can be kept in a tutor folder for easy reference. List the steps to be followed in short, clear terms. A copy of such a list can be found on pp. 40-41.

Give tutors the details of instruction. Have them keep records of each session. On the records sheet, note the goal for the day, procedures to be followed, and results hoped for. Structure sample lessons with steps that you have modeled during tutor training. Perhaps a page listing the steps could be used as a checklist for the tutor to use initially.

When the student is comfortable and sure in the role as tutor, the checklist can be abandoned.

Selecting Skills and Content

Five criteria can be used to decide which skills or activities are suitable for peer teaching. These criteria are as follows:

1. Is the skill essential?
2. Does the task lend itself to drill and practice?
3. Does it involve direct participation of both the tutor and the tutee?
4. Can the expected response of the tutee be clearly and easily evaluated by the tutor?
5. Can available materials be used successfully by the tutor?

Some activities that lend themselves well to peer teaching situations are these: drills, use of textbooks and library books, playing learning games, and using tape recorders, word-processors, and computer software materials.

Skills or activities delegated to a tutoring session need to correspond to recent instruction in class in order to be most effective. Then, as skills develop, they need to be applied to classroom materials and content so that the student will experience the satisfaction of immediate application of new knowledge.

Designing a Tutoring Lesson

During training, show the tutor how to carry out a tutorial session. Model the steps of a lesson, from introduction to evaluation, and then allow time for questions and explanations. Keep the steps to a minimum. Instruction needs to be clear and focused.

Teach the tutor to interact with the tutee in a structured manner. I recommend the following format:

1. Present, or read, each task.
2. Watch your tutee for understanding.

3. As you present the task, alternate with practice as often as necessary.
4. Give constant feedback. If an error is made, encourage the tutee to try again.
5. Be positive and supportive.
6. Record the tasks that have been mastered.
7. Record the tasks that need to be reviewed in the next session.

Teacher Supervision and Monitoring

Once the format has been decided, a lot of time can be saved at the beginning of each session by having everything the tutor is to use in a folder. Keep the routine simple, direct, and consistent. The student tutor will pick up the folder and materials upon entering the room. Include a copy of the lesson format. Have both students sign in on an attendance sheet, and then get right to work. Keep the session business-like for efficiency's sake. Perhaps set a timer for 20 minutes of instructional time. After the tutoring session, ask the duo to evaluate their session, play an educational game that practices the skill, and turn in the folder.

A schedule chart displayed for the students to note before beginning the session should be kept simple. Only the most essential information needs to be included on the schedule. For example:

Tutor Name

Tutee Name

Where to go

When to start

When to stop

Formative and Summative Evaluation

Formative Evaluation

Formative evaluation is administered at checkpoints throughout the tutorial program. It is most effective if it is given immediately following instruction. Students need to see evidence of progress. Academic feedback maintains focus and direction, and skills to be covered during subsequent sessions are identified. The tutee knows what progress was made during the session, and has a sense of continuation to assure mastery. Record the evaluation immediately following instruction. Records can be designed to meet the exact goals of each session, and the evaluation should be recorded on the same page as the stated goals.

Results of each session could be plotted on a graph after each session so that the tutor and tutee can track progress. For example, as more words are added and mastered, the increased number of words known will be recorded higher on the graph. Visible evidence of improvement is satisfying to both students. Other motivational documentation of growth, with a decorative theme, can be used, such as charts, collections of word cards, tokens, and growth posters.

Self-correcting materials enable the student team to function independently. This also permits all children to be tutors. Self-correcting materials can be made available by supplying a master list, filling in answers on commercial materials, or making cards with answers on the back.

It is good practice to combine record keeping with reinforcement. Some sample record forms are included on pp. 48-53. The motivational records that show the tutee's progress can provide a reward when a set goal is met. Some rewards for which to aim might be extra time playing a game, a collection of tokens with which the student could purchase a prize, use of a tape recorder while reading aloud, use of computer software, and other rewards that fit the resources available in your school. Setting goals toward which to strive removes the feeling that the sessions are "just more work." Another incentive is that the tutee is in competition with him- or herself only. Studying hard yields

good results: as a reminder of the goal, the tutee might keep a copy of the session record that shows what was covered, the date, progress, and how much more progress is needed to achieve the desired reward.

Summative Evaluation

Summative evaluation is administered at the end of a course of study or a length of time scheduled for tutoring to determine the overall progress. For instance, when a six-week spelling unit is being learned, a large, unit test will be given at the end of the six-week period. Smaller, formative, weekly spelling tests will precede the large, unit test.

If you pair students to work together weekly for a period of eight weeks on word recognition, at the end of eight weeks you will evaluate the tutee's progress up to that time. Or, if you pair students to work together on a writing project, you will take a sample of their writing to evaluate their progress at the end of a specified time. This does not mean that instruction stops at that time; it simply indicates a checkpoint in the program.

Achievement tests are also summative instruments of measurement. They can be given to compare the amount of reading growth at the end of tutoring to the stage of reading achievement before the student was tutored. This information documents the overall reading achievement of the tutee. Tutor functioning and attitudes are important, as also are the tutee's affective responses (see sample, p. 52). The tutor progress form could be used to conference with the tutor (see sample, p. 53). Any negative behaviors can be addressed at the same time. Items marked "almost never" might indicate the tendencies to be bossy, not encouraging, or a show-off. Discuss these negative traits with the tutor.

Teachers who work together in a tutoring venture need to evaluate their own program just as they do the students. More than academic concerns need to be addressed. You will identify other areas to be discussed with your partner teacher. Take time for evaluation whenever you feel a need to check on any aspect of the tutoring process.

How to Use the Evaluation Forms

The forms provided here are merely samples. Their purpose is to enable you to keep abreast of your students' progress and the changes that occur during the tutoring sessions. Photocopy and use these forms, if you like, or redesign them to fit your own specific needs.

Session Record

This form is filled out by the teacher and placed in the student's folder for the tutor's use. In this example, basic sight words are shown to be the goal. If the session has a different purpose, that will define the goal. The words to be learned by the tutee are listed.

When the tutor gets the folder, she or he can circle the session number and proceed to work with the tutee, using the materials indicated. The purpose of circling the session number is so that the teacher can see how many tries were required for the tutee to meet the initial goal. The materials are supplied by the teacher and placed in the tutor's folder.

At the end of the session, the tutor records the words that were mastered and lists the words that still need to be learned in the column: "Words for Next Session." The form is then placed in the folder and returned to the teacher.

Student Record

This form is also kept in the folder to identify the tutor and tutee, the scheduled session, and the task attempted during that session. It can be an alternative to the Session Record or used simultaneously. The advantage of this form is that continuous progress is shown. For example, if the goal is for the tutee to learn 30 sight words, and in today's lesson 12 words were learned, and last session 10 words were

learned, then the number of words learned in total thus far is 22 words.

After the session outcome is recorded, the teacher writes a statement about the goal for the next session. "Next session, (name of the tutee) will study 8 sight words." Then, the teacher writes a list of the words to be studied.

Progress Graphs

Progress graphs are a motivational record for the teacher to keep in the tutee's folder and for the tutee to see frequently. If the goal for the tutee is to increase the number of words spelled correctly, each score of correctly spelled words can be plotted on a graph. In this way, the student sees visible proof of improvement.

Students as young as third-graders are very impressed by watching that line move higher on the graph after each session. All of us are encouraged when we watch the evidence of our own improvement.

Tutor and Tutee Attitude Forms

You will want to confer regularly with the tutor and the tutee, individually. During the conference ask for true feelings. Help the tutor or tutee put these feelings into words so that they can be written on the forms. In this way, you can help resolve any conflicts that may be obstructing the sessions.

It is good to keep your finger on the pulse of your tutoring program. If there has been a mismatch of personalities, it is important to make a change as soon as you identify the problem.

Tutor Progress Form

Use this form during the teacher/tutor conference. Discuss each tutor behavior with the tutor; then, together, rate that behavior. Discuss any areas that need improvement, and

offer suggestions to assure a change for the positive. Offer positive re-enforcement and encouragement on all points.

Teacher/Teacher Conference Form

When you and another teacher are working together to pair students, meet periodically to evaluate the program. During this conference, jot down notes to the questions on this form. Then, together, address any matters of concern. You may have additional questions to discuss. This form is not all-inclusive; it can be changed or expanded in any way at any time.

Session Record

Tutee:

Date:

Tutor:

Time:

Goal:

Session: 1 2 3 4

Words:

Materials:

Mastered Words:

Words for Next Session:

Student Record

Session Team: Tutee:

Tutor:

Date:

Time:

Place:

Task:

Number correct today:

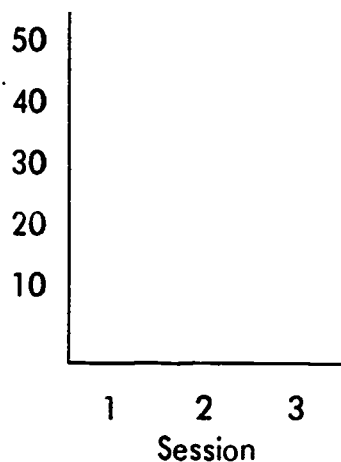
Number correct last session:

Number improved in total:

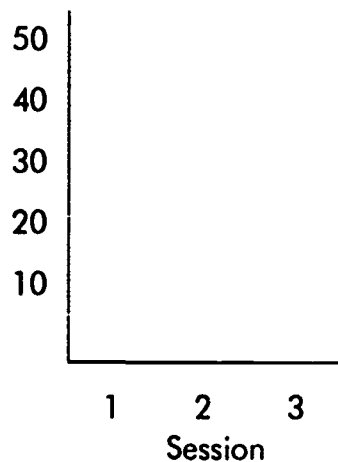
Tasks to be repeated during the next session:

Progress Graphs

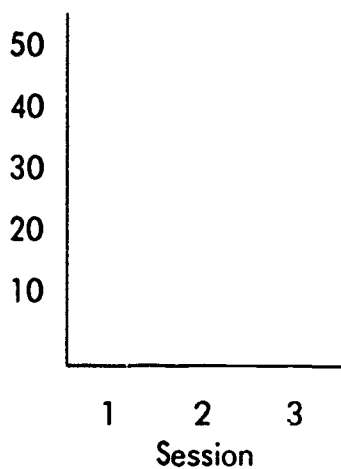
Week 1



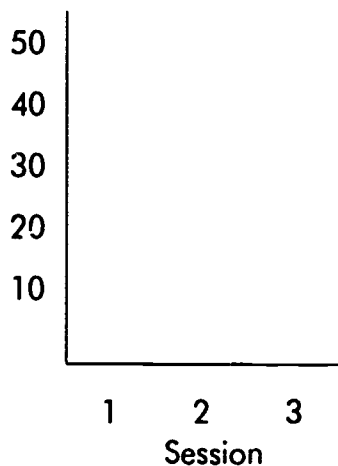
Week 2



Week 3



Week 4



Tutee:

Tutor:

Subject:

Skill:

Tutor Attitude Form

Tutor:

Teacher:

Grade:

Subject:

Student Comments:

My tutee acts like:_____.

The sessions are going_____.

I feel _____ about our partnership.

I feel _____ about my tutee's progress during our sessions.

To be a better tutor I need more work in _____
_____.

What I like about working with another student:

I do ☐ do not ☐ want to continue this partnership for the following reason(s):

Tutee Attitude Form

Tutee:

Teacher:

Grade:

Subject:

Student Comments:

My tutor acts like: _____.

The sessions are going _____.

I feel _____ about our partnership.

I feel _____ about my progress.

I need more work in _____.

What I like about working with another student:

I do ☐ do not ☐ want to continue working with my partner for the following reason(s):

Tutor Progress Form

Tutor:

Teacher:

Grade:

Time/Days:

Behavior: N (almost Never) S (Sometimes) A (almost Always)

_____ is dependable
_____ on time
_____ follows directions
_____ shows self-control
_____ motivates tutee
_____ is a good model
_____ is independent
_____ is imaginative
_____ is encouraging
_____ shows patience

Comments:

Tutee:

Grade:

Subject:

Teacher/Teacher Conference Form

What is going well with our program?

What problems, if any, have surfaced?

What intervention is needed?

Which student teams are (not) working well? Why? (Why not?)

What needs to be changed in the schedule to make it more workable for all concerned?

What other questions have come up?

Review of Research

Ten projects using cross-age peers in paired reading were investigated by Topping in 1987. Tutees ranged in ages from 7 to 14 years old; tutors, from 7 to 18 years old. Achievement growth was reported by the number of months that the students improved, as compared to the length of tutorial instruction time. Only the elementary-age projects are mentioned here.

In Project 1, third-graders were tutored by fourth-graders. After only five weeks of tutoring, these third-graders improved as much as students who had received the same instruction over a 10-month period, or for 40 weeks. In this case, the average gain for the tutees was 10.4 months.

Project 2 consisted of peer dyads of eight-year-olds for 10 weeks. This study yielded measured gains in accuracy and comprehension. Following 10 weeks of tutoring, tutees averaged gains in accuracy of 3.2 months, and in comprehension of 4.2 months. Tutors gained 3.7 months (average) in accuracy, and 8.0 months (average) in comprehension.

Project 4 paired seven- and eight-year-olds with nine- and ten-year-olds of mixed ability for nine weeks. Tutees gained 8.5 months (average), and tutors gained 4.8 months (average).

Other studies in reading and language arts document academic gains both for tutees and tutors. Whether students are paired with age-peers or older students, findings consistently indicate that the benefits outweigh any difficulties that are encountered.

Cooperative learning activities enhance classroom instruction and yield positive gains in all subjects. Students working together on joint projects and lessons with common goals become better at problem solving.

Aside from academic achievement gains, affective outcomes are noted when pupils work together. Tutees are afforded increased individualized instruction. This personal

attention builds up self-esteem, as does also the tutee's growing awareness of the ability to learn and improve.

Tutors enjoy the feeling of being a role model. In addition to academic gains, the helping relationship, control of the learning situation, and being looked up to by the tutee give the feeling of personal competence. Tutors gain new understanding of the content. Tutors enjoy a feeling of being a colleague with the teacher.

Both tutor and tutee grow in understanding and compassion for another person, and a bond develops between them. Interaction skills are practiced and polished; interest in each other leads to mutual encouragement; involvement with one another usually continues after tutoring.

Research in Progress

Teachers continue to try new patterns of instruction to help students become independent learners. In a critical-thinking skills project, teachers at St. Dominic School in Baltimore are employing cooperative learning strategies and peer tutoring. All classes in kindergarten through eighth grade are involved, and every curricular area is included.

This complex program uses peer- and cross-age tutoring. Sixth-graders are using the Neurological Impress Method to help second-graders improve in reading fluency. Seventh-graders are paired to work together in a reading tutorial program using control readers (mechanical reading equipment). Beta Club members, a students' service club, are assigned in a tailored tutoring pattern to help younger peers improve specific skills and learn content material.

These teachers are willing to try new and different techniques to improve their ability to give students one-on-one instruction. These approaches can be implemented by anyone in any school, regardless of the availability or not of high-tech equipment and other expensive materials. All it takes is the determination and imagination of a few to get a school moving in this exciting venture.

Conclusions and Implications

Though the idea of peer teaching and collaborative learning is not new, it appears to be surfacing again and attracting fresh interest. The research has documented, and classroom application has proved, that teachers praise the positive outcomes of peer tutoring as endless. The limits of effectiveness are set only by the limitations of imagination.

Instead of "taking up too much valuable time," peer teaching extends and individualizes instruction. Rather than interfering with content presentation, content is enhanced and broadened through peer cooperative activities.

After peer teaching has been built into the daily schedule, in-class programs add fresh motivation both for the teacher and the students. Pairing with another teacher and another class further expands learning opportunities for all involved.

One teacher (with 18 years of experience) grasped the essence of peer teaching with her sudden realization: "I can't believe how much more time there is to work with individual students one-on-one. Peer teaching has changed my outlook about teaching. I no longer feel defeated and unable to reach every student. I will NEVER teach any other way!"

Teachers who explore the world of peer teaching gain new perspectives about their effectiveness as teachers. They generate fresh energy and enthusiasm about their profession. Just as their students view learning through new lenses, the teachers see their students with new understanding. Learning becomes fun and exciting, and teaching becomes possible and satisfying.

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